



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/624,069

07/21/2003

Rakesh Agrawal

ARC920030034US1

6946

29154 7590 09/11/2008

FREDERICK W. GIBB, III

Gibb & Rahman, LLC

2568-A RIVA ROAD

SUITE 304

ANNAPOLIS, MD 21401

EXAMINER

PADMANABHAN, KAVITA

ART UNIT

PAPER NUMBER

2161

MAIL DATE

DELIVERY MODE

09/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/624,069	Applicant(s) AGRAWAL ET AL.	
	Examiner Kavita Padmanabhan	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1-24 are pending.
2. Claim 13 has been amended.
3. Claims 1-24 are rejected.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/3/08 has been entered.

Oath/Declaration

5. The declaration filed on 7/3/08 under 37 CFR 1.131 has been considered but is ineffective to overcome the Rizvi reference. The 35 USC 102(a) rejections are therefore maintained.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2161

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. **Claims 1-24** are rejected under 35 U.S.C. 102(a) as being anticipated by **Rizvi et al.**, **“Maintaining Data Privacy in Association Rule Mining,” Proceedings of the 28th VLDB Conference, Hong Kong, China, August 2002, 12 pages** (hereinafter “Rizvi”), cited by applicant.

In regards to **claim 13**, **Rizvi** teaches a computer-implemented method of mining association rules from datasets while maintaining privacy of individual transactions within said datasets through randomization (**Rizvi; Abstract**), said method comprising:

- creating randomized transactions from an original dataset (**Rizvi; Section 2.3, paragraph 1, lines 1-3 – “distort the user data before it is subject to the mining process”**) by:
 - randomly dropping true items from each transaction in said original dataset (**Rizvi; Section 3.1, paragraphs 1 and 2**), and
 - randomly inserting false items into each transaction in said original dataset (**Rizvi; Section 3.1, paragraphs 1 and 2**);
- creating a randomized dataset by collecting said randomized transactions (**Rizvi; Section 3.1, paragraph 2, lines 4-7 – “All the customer tuples are distorted in this fashion and make up the database supplied to the miner”**);
- collecting said randomized dataset in a database (**Rizvi; Section 3.1, paragraph 2, lines 4-7**); and

Art Unit: 2161

- mining said database to recover an association rule in said original dataset after said dropping and inserting processes (**Rizvi; Section 4, “Mining the Distorted Database”**), wherein said mining comprises:
 - determining support for said association rule in said randomized dataset (**Rizvi; Section 2.2, paragraphs 1 and 2**);
 - estimating support of said association rule in said original dataset based on said support for said association rule in said randomized dataset (**Rizvi; Section 4, paragraph 1, lines 3-4 – “estimating the true (accurate) supports of itemsets from a distorted database”**; **Section 4.1, paragraph 1**); and
 - outputting said association rule if said support of said association rule in said original data set is estimated to be greater than a predetermined minimum (**Rizvi; Section 2.2, paragraph 2**),
- wherein, due to said creating of said randomized transactions, privacy breaches of said individual transactions are controlled during said mining (**Rizvi; Abstract**).

In regards to **claim 14**, **Rizvi** teaches the method in claim 13, wherein said process of creating randomized transactions comprises per transaction randomizing, such that randomizing operators are applied to each transaction independently (**Rizvi; Section 3.1, paragraph 2, lines 4-7**).

In regards to **claim 15**, **Rizvi** teaches the method in claim 13, wherein said process of creating randomized transactions is item-invariant such that a reordering of said transactions does not affect outcome probabilities (**Rizvi; Section 3.1, paragraph 2**).

In regards to **claim 16**, **Rizvi** teaches the method in claim 13, wherein said dropping of said true items and said inserting of said false items are carried out to an extent such that the chance of finding a false itemset in a randomized transaction relative to the chance of finding a true itemset in said randomized transaction is above a predetermined threshold (**Rizvi; Section 3.2**).

In regards to **claim 17**, **Rizvi** teaches the method in claim 16, wherein said predetermined threshold provides that the chance of finding a false itemset in said randomized transaction is approximately equal to the chance of finding a true itemset in said randomized transaction (**Rizvi; Section 3.2**).

In regards to **claim 18**, **Rizvi** teaches the method in claim 13, wherein said process of creating randomized transactions is performed independently on said transactions prior to the transactions being collected in said database (**Rizvi; Section 3.1, paragraph 2**).

Claims 1-6, claims 7-12, and claims 19-24 are each rejected with the same rationale given for claims 13-18, respectively.

Response to Arguments

8. The declaration filed on 7/3/08 under 37 CFR 1.131 has been considered but is ineffective to overcome the Rizvi reference for the reasons set forth below. The 35 USC 102(a) rejections are therefore maintained.

9. **MPEP 715.07** states, in part,

“III. THREE WAYS TO SHOW PRIOR INVENTION

As discussed above, 37 CFR 1.131(b) provides three ways in which an applicant can establish prior invention of the claimed subject matter. The showing of facts must be sufficient to show:

(A) > (actual)< reduction to practice of the invention prior to the effective date of the reference; or

(B) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to a subsequent (actual) reduction to practice; or

(C) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to the filing date of the application (constructive reduction to practice).”

The submitted 1.131 Declaration states that the declaration “shows that we conceived our invention prior to the August 2002 date of Rizvi, that we were diligent from the date of conception to the date of reduction to practice and that we were further diligent to the date of the filing of the patent application” and that “proof of the conception of the claimed invention prior to August 2002 and diligence in reducing the invention to practice and filing the Patent Application is demonstrated”. Page 8 of applicant’s remarks states that “the Applicants submit that the subject matter of the rejected claims 1-24 was conceived prior to the August 2002

Art Unit: 2161

effective date of Rizvi” and that “the Applicants further submit that they exercised due diligence from prior to this date to filing of the application.”

Therefore, it appears that the applicant is taking approach (C) above to show prior invention. The examiner is therefore evaluating the evidence submitted in view of the fact that applicant is intending to show conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to the filing date of the application (constructive reduction to practice).

10. The evidence submitted is insufficient to establish diligence from a date prior to the reference date of the Rizvi reference to either a constructive reduction to practice or an actual reduction to practice.

MPEP 715.07(a) states, in part,

“Where conception occurs prior to the date of the reference, but reduction to practice is afterward, **it is not enough merely to allege that applicant or patent owner had been diligent.** Ex parte Hunter, 1889 C.D. 218, 49 O.G. 733 (Comm’r Pat. 1889). Rather, applicant must show evidence of facts establishing diligence.” ...

“What is meant by diligence is brought out in Christie v. Seybold, 1893 C.D. 515, 64 O.G. 1650 (6th Cir. 1893). In patent law, an inventor is either diligent at a given time or he is not diligent; there are no degrees of diligence. An applicant may be diligent within the meaning of the patent law when he or she is doing nothing, if his or her lack of activity is excused. Note, however, that the record must set forth an explanation or excuse for the inactivity; the USPTO or courts will not speculate on possible explanations for delay or inactivity. See In re Nelson, 420 F.2d 1079, 164 USPQ 458 (CCPA 1970). Diligence must be judged on the basis of the particular facts in each

case. See MPEP § 2138.06 for a detailed discussion of the diligence requirement for proving prior invention.

Under 37 CFR 1.131, the critical period in which diligence must be shown begins just prior to the effective date of the reference or activity and ends with the date of a reduction to practice, either actual or constructive (i.e., filing a United States patent application)."

MPEP 2138.06 states, in part,

"THE ENTIRE PERIOD DURING WHICH DILIGENCE IS REQUIRED MUST BE ACCOUNTED FOR BY EITHER AFFIRMATIVE ACTS OR ACCEPTABLE EXCUSES. **An applicant must account for the entire period during which diligence is required.** Gould v. Schawlow, 363 F.2d 908, 919, 150 USPQ 634, 643 (CCPA 1966) (Merely stating that there were no weeks or months that the invention was not worked on is not enough.); In re Harry, 333 F.2d 920, 923, 142 USPQ 164, 166 (CCPA 1964) (statement that the subject matter "was diligently reduced to practice" is not a showing but a mere pleading). **A 2-day period lacking activity has been held to be fatal.** In re Mulder, 716 F.2d 1542, 1545, 219 USPQ 189, 193 (Fed. Cir. 1983) (37 CFR 1.131 issue); Fitzgerald v. Arbib, 268 F.2d 763, 766, 122 USPQ 530, 532 (CCPA 1959) (Less than 1 month of inactivity during critical period. Efforts to exploit an invention commercially do not constitute diligence in reducing it to practice. An actual reduction to practice in the case of a design for a three-dimensional article requires that it should be embodied in some structure other than a mere drawing.); Kendall v. Searles, 173 F.2d 986, 993, 81 USPQ 363, 369 (CCPA 1949) (**Diligence requires that applicants must be specific as to dates and facts.**). **The period during which diligence is required must be accounted for by either affirmative acts or acceptable excuses.** Rebstock v. Flouret, 191 USPQ 342, 345 (Bd. Pat. Inter. 1975); Rieser v. Williams, 225 F.2d 419, 423, 118 USPQ 96, 100 (CCPA 1958) (Being last to reduce to practice, party cannot prevail unless he has shown that he was first to conceive and that he

exercised reasonable diligence during the critical period from just prior to opponent's entry into the field); Griffith v. Kanamaru, 816 F.2d 624, 2 USPQ2d 1361 (Fed. Cir. 1987)" ...

"DILIGENCE REQUIRED IN PREPARING AND FILING PATENT
APPLICATION

The diligence of attorney in preparing and filing patent application inures to the benefit of the inventor. Conception was established at least as early as the date a draft of a patent application was finished by a patent attorney on behalf of the inventor. Conception is less a matter of signature than it is one of disclosure. Attorney does not prepare a patent application on behalf of particular named persons, but on behalf of the true inventive entity. **Six days to execute and file application is acceptable.** Haskell v. Coleburne, 671 F.2d 1362, 213 USPQ 192, 195 (CCPA 1982). See also Bey v. Kollonitsch, 866 F.2d 1024, 231 USPQ 967 (Fed. Cir. 1986) (Reasonable diligence is all that is required of the attorney. Reasonable diligence is established if attorney worked reasonably hard on the application during the continuous critical period. If the attorney has a reasonable backlog of unrelated cases which he takes up in chronological order and carries out expeditiously, that is sufficient. Work on a related case(s) that contributed substantially to the ultimate preparation of an application can be credited as diligence.)."

Applicant states at par [0012] of the 1.131 Declaration that "we were diligent from the date of conception in reducing the invention to practice and in pursuing, preparing, and filing the Patent Application. Par [0013] of the 1.131 Declaration states that "On May 15, 2003, a patent attorney was instructed to prepare a patent application" and that "The Patent Application was eventually prepared and filed on July 21, 2003." However, there has been no showing of diligence on the part of the applicant from the time prior to August 2002 (the date of the Rizvi reference) until May 15, 2003 nor has there been any showing of diligence on the part of the

Art Unit: 2161

attorney is preparing the patent application between May 15, 2003 and July 21, 2003. Therefore, the evidence submitted is insufficient to establish diligence during the relevant period.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kavita Padmanabhan** whose telephone number is **(571)272-8352**. The examiner can normally be reached on Monday-Friday, 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kavita Padmanabhan
Assistant Examiner
AU 2161

September 10, 2008

/K. P./

Application/Control Number: 10/624,069

Page 11

Art Unit: 2161

/Apu M Mofiz/

Supervisory Patent Examiner, Art Unit 2161